

DialogIP

New gene of branching enzyme of rice starch - useful for increasing starch yield of grain.

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Patent Family

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| JP 6261767 | A | 19940920 | JP 93265171 | A | 19931022 | 199442 | B |

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Patent Details

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Abstract:

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A new cDNA of rice (*Oryza sativa*) starch branching enzyme gene which has the base sequence given as sequence No. 1 in the specification is claimed.

Also claimed are (1) a gene which encodes the mature protein of rice starch branching enzyme that has the 66th 825th amino acid residues of the polypeptide encoded by sequence No. 1, (2) a gene which encodes the signal peptide of rice starch branching enzyme which has the 1-65th amino acid residues of the polypeptide encoded by sequence no. 1, (3) promoter of rice starch branching enzyme gene comprising a base sequence given as sequence 4, in the specification (4) plant cell in which a DNA sequence is introduced. The DNA sequence is comprising (a) a DNA sequence which encodes all or part of the amino acid sequence encoded by sequence No. 1 and (b) a promoter expressible in a plant cell where the plant is *Oryza sativa* and grain is obtd. by cultivating the *Oryza sativa* and grain is obtd. by cultivating the *Oryza sativa*. (5) a method where the enzyme activity of the rice starch branching enzyme is changed by introducing the DNA into a plant cell and (6) expression of a heterologous gene by introducing the promoter of (3) fused to DNA encoding the heterologous gene into a plant cell.

USE - By introducing the DNA sequence in *Oryza sativa*, content of starch contg. component in grain can be increased. Also by using the promoter, rice starch branching enzyme gene or foreign gene can be expressed in plant seeds.

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